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EXAMINER

JOSEPH, DENNIS P

ART UNIT	PAPER NUMBER
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2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/677,119	Applicant(s) BOOTH, LAWRENCE A.	
	Examiner Dennis P. Joseph	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-31, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-31, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to amendments in application No. 10/677,119, filed on May 17, 2007. Claims 1-16, 18-31 and 33-34 are pending and have been examined.

Claim Rejections – 35 USC § 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 103(a) that forms the basis for the rejections under this section made in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-15, 18-31 and 33-34** rejected under 35 U.S.C. 103(a) as being unpatentable over **Kawabe (US 2003/0169247 A1)** in view of **Hashimoto (US 2002/0097208 A1)**

Kawabe teaches in Claim 1:

A method, comprising:

receiving partial-display data ([0247], partial display data);

receiving color resolution data ([0126] and [0092]);

receiving display resolution data ([0094]); and

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updating a display to use less power in response to receiving the data, using a combination of the partial-display data, the color resolution data, and the display resolution data. ([0007], “the liquid crystal display panel is divided into upper and lower halves, and a data line drive circuit is provided for each of the upper and lower segments.” The data lines contain the video display information used to update the display.), but

Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

Furthermore, Hashimoto teaches “The control circuit **81** receives the power saving mode signal PS of high level “H” and the partial display mode signal PI of high level “H”, based on which the control circuit 81 generates the color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L”. The color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L” are supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe’s

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partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Kawabe teaches in Claim 2:

The method of claim 1, further comprising: receiving update rate data to implement an update rate of between about zero cycles-per-second and about one hundred twenty cycles-per-second. ([0222])

Kawabe teaches in Claim 3:

The method of claim 2, wherein the update rate data is provided by a hardware update mechanism. ([0097], "In the timing controller 114, a timing signal required for the display device (a display module) is produced by the scanning timing generator circuit 103 shown in FIG. 1." The timing circuit is responsible for the update rate data.)

Kawabe teaches in Claim 4:

The method of claim 2, wherein the update rate data is provided by an on-demand update mechanism. ([0242], "a display device user requests a display video image keeping the vertical resolution of an original image." This shows a user request to update the partial display, triggering a routine.)

Kawabe teaches in Claim 5:

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The method of claim 1, wherein updating the display further comprises: resetting a display pipeline to a smaller size defined by the partial-display data. ([0093], “In the case where the number of pixel rows in the vertical direction of the video data received is **different from that in the effective display area** of the display device, the conversion of resolution, the so-called scaling is carried out by the aforesaid receiving circuit.” In this situation, when the partial data is received, scaling is done to adjust the display settings.)

Kawabe teaches in Claim 6:

The method of claim 1, wherein updating the display further comprises: blanking a portion of a display ([0006])

Kawabe teaches in Claim 7:

The method of claim 6, wherein the portion of the display is defined by the partial-display data. ([0349], “In FIG. 34B, although part of the video signal supplied in the pixel array in a video display period has been processed, in FIG. 34C, it is processed with a pattern of the blanking video image. In this method, a video image partially including an area showing different brightness in the blanking display period $n+1$, for example, is displayed in place of the blanking video image where the entire area of a picture is displayed in black.” This shows the blanked area portion is decided by the partial display data.)

Kawabe teaches in Claim 8:

An article comprising a memory having associated data, wherein the data, when accessed, results in a machine performing:

receiving partial-display data ([0247], partial display data);

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receiving update rate data ([0222], update frequency);

receiving display resolution data ([0094]); and

updating a display to use less power in response to receiving the data, using a combination of the partial-display data, the update rate data, and the display resolution data. ([0007])

Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

Furthermore, Hashimoto teaches “The control circuit **81** receives the power saving mode signal PS of high level “H” and the partial display mode signal PI of high level “H”, based on which the control circuit 81 generates the color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L”. The color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L” are supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

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Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe's partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Kawabe teaches in Claim 9:

The article of claim 8, wherein the update rate data includes an on-demand update request. ([0242], "a display device user requests a display video image keeping the vertical resolution of an original image." This shows a user request to update the partial display, triggering a routine.)

Kawabe teaches in Claim 10:

The article of claim 8, wherein the update rate data includes a hardware update signal to provide a display update rate of about zero cycles-per-second to about one hundred twenty cycles-per-second. ([0222])

Kawabe and Hashimoto teach in Claim 11:

The article of claim 8, wherein the data, when accessed, results in the machine performing:

Receiving a power reduction request (The combination teaches to use power saving data to alter the information given to the display)

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modifying at least one of the partial-display data (Kawabe, [0247], partial display data), the update rate data ([0222]), and the display resolution data ([0094]) responsive to the power reduction request. (The combination teaches to use the power saving data to alter the information given to the display)

Hashimoto teaches in Claim 12:

The article of claim 8, wherein the data, when accessed, results in the machine performing:

receiving a power reduction request included in the power management data;([0165]);
and

modifying color resolution data responsive to the power reduction request. ([0331], "The control circuit **81** receives the power saving mode signal PS of high level "H" and the partial display mode signal PI of high level "H", based on which the control circuit **81** generates the color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L". The color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L" are supplied to the data electrode driver circuit **82**.")

Kawabe teaches in Claim 13:

An apparatus, comprising:

a partial-display module ([0247], partial display data);

a color resolution module ([0126] and [0092]);

a display resolution module ([0094]);

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and a data register coupled to the partial-display module, the color resolution module, and the display resolution module; ([0095] memory as register)

a static-update display ([0101], static or still image mode) to couple to the data register ([0281]) and to update in response to receiving a combination of data provided by the partial-display module, the color resolution module, and the display resolution module.

Kawabe does not explicitly teach of using "power management data" to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches "The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes." (Hashimoto, [0088])

Furthermore, Hashimoto teaches "The control circuit 81 receives the power saving mode signal PS of high level "H" and the partial display mode signal PI of high level "H", based on which the control circuit 81 generates the color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L". The color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L" are supplied to the data electrode driver circuit 82." (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

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Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe's partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Kawabe teaches in Claim 14:

The apparatus of claim 13, wherein the partial-display module is to provide a hardware update frequency. ([0097], "In the timing controller 114, a timing signal required for the display device (a display module) is produced by the scanning timing generator circuit 103 shown in FIG. 1." The timing circuit is responsible for the update rate data.)

Kawabe teaches in Claim 15:

The apparatus of claim 13, wherein the hardware update frequency is between about zero cycles-per-second and about one hundred twenty cycles-per-second. ([0222])

Kawabe teaches in Claim 18:

The apparatus of claim 13, wherein the static-update display ([0101], static or still image mode) is coupled to a frame buffer to couple to the data register. ([0281])

Kawabe teaches in Claim 19:

A system, comprising:

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an apparatus including a partial-display module ([0247], partial display data), a color resolution module ([0126] and [0092]), a display resolution module ([0094]), and a data register to couple to the partial-display module, the color resolution module, and the display resolution module ([0095], memory as register which couple the different modules), and

a static-update display ([0101], static or still image mode) to couple to the data register ([0095]) and to update using less power in response to receiving a combination of data provided by the partial-display module, the color resolution module, and the display resolution module ([0007]);

Kawabe does not explicitly teach that the apparatus has a “receiver”, “an omnidirectional antenna coupled to the receiver”, or a “processor to couple to the apparatus and to the receiver”

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The antenna mark **32b** indicates whether the position of the mobile phone or the personal handy-phone system is in a service area of a wireless phone service on a mobile communication network.” ([0073]) This shows the apparatus has an antenna and a receiver for incoming and outgoing signals. It is also obvious that a processor is analyzing these and providing their information on the display shown in Figure 8.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the antenna and receiver as taught by Hashimoto with Kawabe’s partial display by implementing the features with the processor unit with the motivation that the antenna “indicates whether the position of the mobile phone or the personal handy-phone system is in a service area of a wireless phone service on a mobile communication network.” ([0073]) It can be used to see signal strength as well as connectivity to a nearby network.

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Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

Furthermore, Hashimoto teaches “The control circuit **81** receives the power saving mode signal PS of high level “H” and the partial display mode signal PI of high level “H”, based on which the control circuit 81 generates the color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L”. The color mode signal CM of high level “H”, the partial display signal PM, and the monochrome signal BW of low level “L” are supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe’s partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Kawabe teaches in Claim 20:

The system of claim 19, wherein the color resolution module is to provide a selected amount of color resolution reduction. ([0189], "Each of the videos is subjected to a scaling process." Each type of data can either be scaled up or down depending on the situation.)

Kawabe teaches in Claim 21:

The system of claim 20, wherein the selected amount of color resolution reduction is selected from a range of about three-fourths to about one-tenth. ([0136], "the plural-times scanning data generator circuit **102** compresses the original video **801** in a vertical direction into its half size." The original video contains several bits of data and it is reduced by one half.)

Kawabe teaches in Claim 22:

The system of claim 19, wherein the display resolution module is to provide a selected amount of display resolution reduction. ([0136], "the resolution is made equal to that the pixel array **106** and then the vertical resolution is compressed to a half value to generate a video image **802**." The display resolution data is compressed to half of its original state.)

Kawabe teaches in Claim 23:

The system of claim 22, wherein the selected amount of display resolution reduction is selected from a range of about one-half to about one-sixteenth. ([0136], "the resolution is made equal to that the pixel array **106** and then the vertical resolution is compressed to a half value to generate a video image **802**." The display resolution data is compressed to half of its original state.)

Hashimoto teaches in Claim 24:

The system of claim 19, further comprising: a cellular telephone transmitter coupled to the omnidirectional antenna. (It is inherent that a cell phone as illustrated in Figure 8 will have a transmitter for sending out signals.)

Kawabe teaches in Claim 25:

An apparatus, comprising:

a controller ([0085]) to receive a combination of data including partial-display data ([0247], partial display data),

color resolution data ([0126] and [0092]), display resolution data ([0094]), and update rate data ([0222]); and

a display to update using the combination of data ([0007]), but

Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly

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significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

Furthermore, Hashimoto teaches “The control circuit **81** receives the power saving mode signal PS of high level "H" and the partial display mode signal PI of high level "H", based on which the control circuit 81 generates the color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L". The color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L" are supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe's partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Kawabe teaches in Claim 26:

The apparatus of claim 25, wherein the display comprises a static update display to couple to the controller. ([0101], static or still image mode as part of the display structure)

Kawabe teaches in Claim 27:

The apparatus of claim 26, wherein the update rate data is provided by an on-demand update mechanism. ([0242], “a display device user requests a display video image keeping the

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vertical resolution of an original image.” This shows a user request to update the partial display, triggering a routine.)

Kawabe teaches in Claim 28:

An apparatus, comprising:

a controller ([0085]) to modify a combination of data including partial-display data ([0247], partial display data),

color resolution data ([0126] and [0092]), display resolution data ([0094]), and update rate data ([0222]), and

a display to update in response to data, according to the combination of data. ([0007])

Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

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Furthermore, Hashimoto teaches “The control circuit **81** receives the power saving mode signal PS of high level "H" and the partial display mode signal PI of high level "H", based on which the control circuit 81 generates the color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L". The color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L" are supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe's partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Hashimoto teaches in Claim 29:

The apparatus of claim 28, wherein the power management data ([0165], “The control circuit **41** also receives a furthermore input of a power saving mode signal PS.” comprises a power reduction request. ([0331], “If both the power saving mode signal PS and the partial display mode signal PI are high level "H", then this means that the mobile phone is in the stand-by mode.” The stand by mode is a power reduction request.)

Kawabe teaches in Claim 30:

The apparatus of claim 28, wherein the update rate data is provided by an on-demand update mechanism. ([0242], “a display device user requests a display video image keeping the

vertical resolution of an original image.” This shows a user request to update the partial display, triggering a routine.)

Kawabe teaches in Claim 31:

A method, comprising: modifying a combination of data including partial-display data ([0247], partial display data), color resolution data ([0126] and [0092]), display resolution data ([0094]), and update rate data ([0222]), and

Updating a display in accordance with the combination of data ([0007]), but

Kawabe does not explicitly teach of using “power management data” to update the display using the combination of the partial-display data, the color resolution data and the display resolution data.

However, in the same field of endeavor, partial displays with power saving features, Hashimoto teaches “The present invention provides a method and a circuit for driving a color liquid crystal display in a normal driving mode and a **power saving mode**, wherein in the normal driving mode, voltages corresponding to image display data are applied to data electrodes of the color liquid crystal display, and wherein in the **power saving mode**, voltages corresponding to highly significant bit signals of the image display data are applied as display data signals to the data electrodes.” (Hashimoto, [0088])

Furthermore, Hashimoto teaches “The control circuit 81 receives the power saving mode signal PS of high level "H" and the partial display mode signal PI of high level "H", based on which the control circuit 81 generates the color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L". The color mode signal CM of high level "H", the partial display signal PM, and the monochrome signal BW of low level "L" are

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supplied to the data electrode driver circuit 82.” (Hashimoto, [0331]) Based on the power saving signal, a **combination** of the various display information parts is changed and the display is then updated with the new combination.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the power management feature as taught by Hashimoto with Kawabe’s partial display by implementing the feature with the controller with the motivation that the power saving mode reduces power consumption and would be obvious to use a well known technique (power saving) on display panels.

Hashimoto teaches in Claim 33:

The method of claim 31, wherein the power management data includes a battery connection notification. ([0073])

Hashimoto teaches in Claim 34:

The method of claim 31, wherein the power management data includes an alternating current power supply connection notification. ([0306])

4. **Claim 16** rejected under 35 U.S.C. 103(a) as being unpatentable over **Kawabe (US 2003/0169247 A1)** in view of **Hashimoto (US 2002/0097208 A1)**, as applied to Claim 13, in further view of **Hattori et al. (US 2003/0001809)**

As per Claim 16:

The apparatus of claim 15, wherein the hardware update frequency, but

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Kawabe does not explicitly teach that the frequency “is between about two cycles-per-second and about ten cycles-per-second.”

However, in the same field of endeavor, display devices, Hattori teaches “Also, for the repetition frequency of the transition voltage application, a frequency between continuous application and about 100 Hz is suitable, but preferable is a frequency from 10 Hz” (Hattori, [0263]) The frequency is at which the driving takes place.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the driving frequency range as taught by Hattori with Kawabe’s partial display, as modified by Hashimoto, by implementing the feature with the controller with the motivation that “as can be seen from Table 1, when the frequency is in the range of 0.1 Hz to 10 Hz and the duty ratio is in the range of 2:1 to 1000:1, the transition time is very short” (Hattori, [0265]) “and the transition is concluded in short time so that there are no display defects ([0010]).” By having a short transition period, defects can be avoided.

Response to Arguments

5. Applicant’s arguments with respect to claims 1,8,11,12,13,19,25 and 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusions

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6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis P. Joseph whose telephone number is 571-270-1459. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

DJ

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

